

PATENT APPLICATION



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	LYNCH)	
)	Confirmation No. 4986
Serial No.:	10/611,548)	
)	Group Art Unit: 1712
Filed:	July 2, 2004)	
)	Examiner: M. Moore
Title:	FILM FORMING COATING)	
	COMPOSITION CONTAINING)	Attny. Dkt.: 01-233
	SURFACE TREATED BARIUM)	
	SULFATE, AND METHODS)	
	OF USE)	

DECLARATION UNDER 37 C.F.R. '1.132

Mail Stop _____
U. S. Patent and Trademark Office
2011 South Clark Place, Customer Window
Crystal Plaza two, Lobby, Room 1B03
Arlington, VA 22202

Sir:

I, Thomas J. Lynch, declare and state as follows:

I have a Ph.D. in Chemistry as conferred upon me by Texas A&M University, College Station, Texas U.S.A. in 1981; and I obtained a Bachelors degree of Science in Chemistry from Marist College, Poughkeepsie, New York, U.S.A. in 1977.

I am the sole inventor of the invention described and claimed in the above-identified application, and I am familiar with its subject matter, contents and prosecution history, including the Office Action mailed April 22, 2004.



From 1996 to the present, I have been employed as a Research Scientist at J.M. Huber Corporation, in its Engineered Materials division, at its sites located at both Macon, Georgia and Fairmount, Georgia, U.S.A., and my current position title is that of "Technology Manager."

Since on or about June, 1996, I have been involved, among other things, with research and development in technology relating to preparation and use of pigments and fillers which are useful for coating applications.

BACKGROUND

I understand that the U.S. Patent No. 3,849,187 to Fetscher, which was relied in the Office Action of April 22, 2004, describes encapsulating compositions incorporating a small amount of an epoxy reactive silane and 0-70% inorganic filler (abstract). The inorganic filler is exemplified by Fetscher as "[f]iller components such as finely divided silica, quartz, calcium silicate, barium sulfate, hydrated alumina, and the like ...," (col. 4, lines 32-35).

With this relevant background information in mind, I now will describe additional experimental work showing the surprising and the unexpected effects of my invention.

COMPARATIVE EXPERIMENTATION

I carried out, or supervised the carrying out of, the following experiments conducted to investigate the affects of using aminosilane (AS) treated barium sulfate as a coating filler, according to my invention, as compared to a similar coating that instead is filled with amorphous silica. Additional comparison runs also were conducted using untreated barium sulfate or barium sulfate treated with silane chemistry other than an aminosilane such as an epoxysilane (ES), an isocyanatosilane (IS), an alkylsilane (iBS), and a polyalkylsilane (HS).

The experimental protocol used was the same as that described in Example 1 of my patent application (see pages 33-34) relating to salt spray corrosion tests, except that in one comparison run. performed, amorphous silica (Imsil A-8, Unimin Specialty Minerals, Inc.), was used in place of barium sulfate, as the coating filler.

The experimental results obtained from these experiments are tabulated below.

Single surface reagent modified barite blend	General Scribe Corrosion	Blistering Degree	Blistering Size	Bare Panel Corrosion	Bare Scribe Corrosion	Average Panel Rating
B1+B7 / AS	5.5	10.0	10.0	10.0	8.3	8.9
B1+B7 / HS	5.0	6.5	5.0	8.0	6.3	6.8
B1+B7 / ES	6.0	3.0	4.0	10.0	7.5	6.8
B1+B7 / IS	5.0	2.5	5.0	9.0	7.0	6.4
Amorphous silica	5.5	5.2	3.5	9.0	5.0	6.1
B1+B7 / iBS	3.0	2.5	2.5	5.0	3.5	4.4
B1+B7	3.0	2.5	2.5	1.5	1.5	3.4

As seen from the above-tabulated results, the coating filled with the aminosilane treated barium sulfate was significantly superior to the comparison coating filled with amorphous silica, as well as the coatings filled with untreated barium sulfate or barium sulfate treated with a different type of silane chemistry.

In my opinion, the results summarized herein are truly unexpected and could not have been predicted from the prior art, including Fetscher et al., made of record in the above-identified application.

I declare further that all statements made herein, or referred to herein, of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful statements may jeopardize the validity of the application or any patent issuing thereon.

Respectfully submitted,

Date:

July 1, 2004

By:

Thomas J. Lynch
Thomas J. Lynch